

Registration For AEP Opens September 22

Many Classes Qualify
For UCNC Plan Benefits

Registration for courses to be offered by the Oak Ridge Adult Education Program for the 10-week Fall Quarter will be held from September 22 through September 30, with classes starting September 29. Many of the 100 courses offered by the AEP qualify for Y-12ers and other Union Carbide Nuclear Company employees in Oak Ridge for benefits under the Company Educational Assistance Program.

Wide Variety Is Offered

The AEP Program for the Fall Quarter offers a wide variety of general courses, including instruction in chemistry, blueprint reading, electricity and electronics, foreign languages, mathematics and other topics that might be valuable to Y-12ers intent on bettering their present job performance or qualifying for better posts with the Company.

The AEP also offers business subjects such as law, accounting, English, shorthand and typing. Also offered are high school courses.

Ralph Pearson, of the Training Department, Bldg. 9704-2, plant phone 7751, is coordinator for the UCNC Educational Assistance Program in Y-12. He will provide any information desired on courses, eligibility and other matters covered by the Program.

Evening School Classes Varied

In addition to the AEP courses, the University of Tennessee is offering a wide variety of undergraduate subjects in its Evening School. A special registration for the Evening School is being offered UCNC employees Tuesday, Wednesday and Thursday of this week, September 16, 17 and 18, at the UT Evening School office, Room 116, Oak Ridge High School. Registration hours are from 6:30 p.m. to 9 p.m. Y-12ers also may enroll for Evening School classes next week, September 25, 26 and 27 at the same place and hours.

The University of Tennessee Resident Graduate Program classes will accept enrollment next Monday, September 22, from 6 p.m. to 9 p.m. at the Oak Ridge Institute of Nuclear Studies Training Building.

Swiss Scientist To Speak At Physics Seminar Meet

A Swiss scientist, Paul Huber, of the Physikalisches Institut der University of Basel, will speak at a meeting of the physics seminar of the Oak Ridge National Laboratory Physics Division on Friday afternoon of this week, September 19. The meeting will be at 3:15 p.m. in the auditorium of Bldg. 4500, ORNL. The subject of the talk will be "Precision Disintegration Rate Measurements Using the Coincidence Method." Y-12ers interested in the subject are invited to attend the seminar session.

UCC SALES OFFICE OPENS

The new Union Carbide Corporation consolidated sales office has been opened at Moorestown, N. J. The two-story building will serve as regional sales headquarters for Bakelite, Linde, National Carbon and the Chemicals Company. These sales offices formerly were located in Philadelphia, Pa.

Good Manners While Driving Saves Lives



A smile, waiting one's turn, co-operation, courtesy and understanding—these are good manners that affect the daily lives of every Y-12er. They are little things, but they can make a big difference while shopping, at the movies, at work, at home or away.

Pays Off In Survival

Another public place—the highway—has its set of unwritten rules too. On the highway, however, good manners can mean life itself. More and more drivers are coming around to the realization that highway manners pay off—not just in social approval, but in survival itself!

Better laws and safer cars have gone a long way toward control of the accident toll. But there is a limit to what legislation and engineering can do. Plain and simple highway courtesy requires no voting, no scientific research, no construction programs. Plain and simple highway courtesy is up to the individual driver.

Courtesy Should Become Habit

It also has to be the kind of courtesy that becomes habit such as staying on your side of the highway even when there are no other cars about; taking your turn rather than cutting around and ahead of a line of cars; using your patience instead of your horn; letting the pedestrian cross even if he is where he has no business to be; dimming your lights although the other fellow doesn't.

Professional drivers such as cabbies, policemen, truckers, racing drivers say that the good driver prides himself on how smoothly he controls his vehicle, on his ability to drive without sudden stops and starts and frequent lane shiftings. Always, whenever possible, he signals his intention to stop, turn and slow down. A good driver knows a life was never saved by losing his temper.

In effect, when drivers get behind the wheel, they suddenly take on weight—well over a ton of steel. Just as in social life, on the highway it does not pay to throw your weight around. Safety on the highway begins with good manners behind the wheel of your car.

ENTREES ARE ANNOUNCED FOR SPECIAL LUNCHES

Spanish rice and meatballs will be the entree for the 50-cent Special Lunch to be served tomorrow, Thursday, September 18, at the Y-12 Cafeteria. On next Tuesday the main dish for the Special Lunch will be stuffed bell pepper with cheese topping. Each Special Lunch also includes one vegetable, choice of salad or dessert and rolls and butter.

ASM To Hear Talk On Space Problems

Student Metallurgy
Night Program Is Set

The latest advances in Materials Applications for Space Flight Vehicles will be discussed by W. S. Pellini at the annual Student Metallurgical Night sponsored by the Oak Ridge Chapter of the American Society for Metals tonight, Wednesday, September 17, at 7:30 o'clock at Oak Ridge High School.

Problems To Be Described

Pellini is superintendent of the Metallurgical Division of the Naval Research Laboratory, Washington, D. C. He is an internationally-known materials expert and will describe the problems which metallurgists of this country must solve in the important race for space flight supremacy.

High school science students and teachers in the East Tennessee area have been invited to attend the meeting, which also will feature a short technicolor movie entitled "How Metals Behave." This film was prepared at the Massachusetts Institute of Technology and is designed to give the student, the layman and the technical man a better understanding of metals and their wide application.

To Present Scholarship

Another highlight of the program will be the presentation of the \$400 American Society for Metals Scholarship Award to Joe Earl Spruiell, of Knoxville, a recent honor graduate of the University of Tennessee. He plans to enter UT Graduate School this fall to continue his studies in the Department of Chemical and Metallurgical Engineering.

Formal announcement of the decision by the Oak Ridge Chapter to establish a \$250 scholarship for a sophomore metallurgy student at the University of Tennessee will be made at the meeting. This scholarship will be called the Oak Ridge Chapter ASM Scholarship in Metallurgical Engineering.

Part Of National Program

The Student Metallurgy Night is the local chapter's part in a National ASM program to help alleviate the shortage of metal scientists and engineers by presenting to high school students the challenges and rewards in this field. Last year a similar meeting held at the University of Tennessee was attended by nearly 350 high school science students and teachers from the East Tennessee area.

BRITISH MAYOR VISITS

The mayor of Bristol, England, recently visited the twin cities of Bristol, Tennessee and Virginia, touring schools and hospitals.

SAFETY SCOREBOARD

The Y-12 Plant Has
Operated
82 Days Or
2,558,000 Man-Hours
(Unofficial Estimate)
Without A Disabling
Injury
Through September 14
Phone 7755
For Daily Report
On Accident-Free Hours

Y-12er F. A. Patton, Jr., Presents Paper At Geneva

Economic Features Of Manufacturing Nuclear
Fuel Elements Said To Be Least Understood

The economic features of the manufacture of nuclear fuel elements from Uranium 235 enriched uranium hexafluoride are among the least understood aspects of uranium fuel cycles.

In a paper presented to the Second United Nations International Conference on the Peaceful Uses of Atomic Energy at Geneva, Switzerland, on September 8, F. S. Patton, Jr. of the Y-12 Process Analysis Department, and associates, describe the manufacturing steps and operations on facilities and production cost estimates for uranium metal, uranium-zirconium and uranium oxide fuel slugs.



F. S. Patton, Jr., uranium metal, uranium-zirconium and uranium oxide fuel slugs.

Three Others Are Co-Authors

Co-authoring the paper presented by Patton were Y-12 Plant Superintendent John P. Murray, Roger F. Hibbs, of the Chemical Division; and W. L. Griffith, also of Process Analysis.

The paper described two potential installations for the manufacture of fuel elements. The first was a small uranium fuel element manufacturing and scrap recovery facility with a capacity sufficient to initially charge and sustain only a single sodium graphite reactor with an annual demand of 21,000 kilograms of uranium as uranium-zirconium alloy cylindrical slugs. Also described was a larger, more versatile, facility of such flexibility in design that it would be able to produce, and process the salvage from a number of different fuel materials such as uranium-zirconium alloy, non-alloyed uranium, uranium-aluminum alloy, and uranium dioxide. This "job shop" would have a capacity approximately six to seven times that of the small plant.

Facilities Are Compared

In comparison of the two, the paper pointed out that: (a) The unit cost in the "job shop" on non-alloyed uranium slugs is found to be about four-fifths of the cost of the uranium-zirconium alloy slugs, and the cost of uranium dioxide slugs is about two-thirds the cost of the uranium-zirconium slugs. All unit costs are about one-tenth greater at a 70 per cent production level than at 100 per cent utilization of facilities, and about twice as costly at 25 per cent utilization; (b) The initial investment in the "job shop" is about three times as great as for the "small plant," but the unit processing costs (including amortization of initial investment, taxes, and profit) for the larger versatile plant are found to be approximately one-half as great; (c) A "small plant" built as a non-profit enterprise, in a country wherein the cost of skilled labor is only \$1 per man-hour (instead of approximately \$3 as was assumed in this paper), would be competitive with a commercial enterprise "job shop" located in a country having the higher wage scale.

Traffic Reduction Possible

A reduction in traffic with gaseous diffusion plants can be effected by blending uranium recovered from irradiated fuel processing facilities with other available enriched uranium to achieve a desired U-235 content.

The principal health problem in the unirradiated processing phases

AEC Museum Entrance Fee Is Removed

The public now is being admitted free to the Atomic Energy Commission's American Museum of Atomic Energy, S. R. Sapir, Manager of the Commission's Oak Ridge Operations, has announced.

The museum serves both as a permanent exhibit to illustrate the peaceful uses of atomic energy and as a headquarters for the Commission's national traveling exhibits program. The admission charge to the museum is being cancelled in line with the policy of presenting Commission exhibits without cost to the sponsor and without charge to the viewing public. Children under 12 are admitted only when accompanied by an adult.

The museum was started in 1949. Since that time, about 710,000 persons from every state and many foreign nations have visited the museum, with approximately 75,000 currently visiting it annually.

A tour of the museum covers nuclear energy theory and many aspects of the Commission's extensive programs, from the mining and processing of uranium ores to the application of uranium and its by-product materials to peaceful pursuits. Extensive material is presented on production of radioisotopes and their uses in the fields of research, agriculture, medicine and industry. The museum utilizes descriptive panels, motion pictures, lectures, working models and demonstrations to provide information on atomic energy in a manner easily understood by the viewing public.

The American Museum of Atomic Energy and the national traveling exhibits program are administered for the Commission by the Oak Ridge Institute of Nuclear Studies through its Museum Division.

Western Square Dancing Attracting Many Y-12ers

Western Style Square Dancing—sometimes known as Texas Style—is catching on with many Y-12ers in clubs in Oak Ridge, Knoxville and Kingston. Classes in the Western Style Square Dancing will start at the Pine Valley School in Oak Ridge Friday night of this week, September 19, and Y-12ers wishing information on the group may obtain it from E. L. Armstrong, General Machine Shop, plant phone 7587. Another class for beginners will open September 29 at the Kingston Skating Rink under supervision of Bob Baker, Process Maintenance. Baker is an instructor and dance caller for two Oak Ridge square dance clubs and may be reached at plant phone 7468 by Y-12ers wanting information on the Kingston project.

The Bulletin

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Meet The Press

The Bulletin Reporters



LAST-BUT FAR FROM LEAST—in the roster of reporters for The Bulletin are Jean Granstaff, left, and Ada Hopkins, who record the happenings in the Shift Superintendents and Utilities Division. The Bulletin is proud to present its capable staff of volunteer aides, without whose help publication of the plant newspaper would be difficult. Of course, even since the publication of pictures of the reporters began several weeks ago, there have been some changes made through transfers, resignations and other reasons. As soon as possible the names and pictures of replacements will be printed.

Analytical Chemistry Second Conference Set

Gatlinburg To Be Site; Y-12ers Are Invited

The Second Conference on Analytical Chemistry in Nuclear Reactor Technology has been scheduled for Monday, Tuesday and Wednesday, September 29 and 30 and October 1, at Gatlinburg, Tenn. The conference is sponsored by the Analytical Chemistry Division of Oak Ridge National Laboratory and meetings will be held in the Gatlinburg civic auditorium.

Former Y-12er Chairman

C. D. Susano, former Y-12er and now with the sponsoring division of ORNL, will be chairman of the conference. A number of Y-12ers have expressed interest in the conference and planned to attend. Chairman Susano has invited any other Y-12ers who wish to do so to register for the meeting. No registration charge is made.

The objective of the conference is to provide a forum for the exchange of information by persons engaged in the facets of analytical chemistry that are directly related to the startup and operation of nuclear reactors. The meeting is a continuation of the first conference held at Gatlinburg in November, 1957, which dealt specifically with a review of recent developments in the analytical chemistry of important reactor materials.

64 Papers Scheduled

Topics for the sessions of the 1958 conference include Applications of X-Ray and Emission Spectroscopy, The Status of Analytical Chemistry in Certain Specific Reactor Operations and Research Activities, Boron and Special Analyses, Particle-size Analyses, Instrumentation in Nuclear Reactor Technology, Remote Control Techniques and Nucleonics. Altogether, 64 papers will be presented during the three-day program, augmented by panel discussions on all topics.

Give other motorists the brake—as well as the breaks.



JONES-TITTSWORTH

Fred William Jones, of the Y-12 Mechanical Engineering Department, and his bride, the former Miss Sue Meek Tittsworth, of Knoxville, are at home at 226 Purdue Ave., Oak Ridge, following their marriage at 4 p.m. Saturday, July 26, at the Lincoln Park Methodist Church, Knoxville. The bride is the daughter of Mr. and Mrs. George H. Tittsworth, Jr., 218 Atlantic Ave., Knoxville. Parents of the groom are Mr. and Mrs. Fred S. Jones, of Rockwood, Tenn.

The double ring ceremony was performed by the Rev. Ted R. Witt, pastor of the church. A program of wedding music was presented by Mrs. Frank Hood, vocalist, accompanied on the organ by R. W. Bauch.

The bride was given in marriage by her father. For her wedding the bride wore a gown of embroidered Swiss organdy over taffeta, fashioned with a square neckline, short fitted sleeves and a full skirt that extended into a chapel train. Her tiered veil of English illusion was held by a Juliet cap of embroidered Swiss organdy. Her flowers were a bouquet of white feathered carnations, white roses and ivy.

Matron of honor was Mrs. Sid Hayworth and bridesmaids were Miss Martha Neger, of Wartburg; and Mrs. James A. Jennings, Knoxville. Little Miss Wawanna Moneymaker, cousin of the bride, was flower girl.

The father of the groom was best man. Ushers were Robert Jones, Rockwood, brother of the groom; Curtis Monger, Lenoir City, brother-in-law of the groom; David DeWalt, of Clinton and a fellow employee of the groom; and William Peters.

A reception was held in the church parlor after the ceremony, following which the couple took a honeymoon trip to Fontana.

The bride is a graduate of the Knoxville Business College and also attended the University of Tennessee. The groom is a graduate of the University of Tennessee.

WATKINS-CUNNINGHAM

Now living at 207 Michael St., Knoxville, are Mr. and Mrs. Ernest Richard Watkins, Jr., who were married Friday, July 4, at Morristown, Tenn. The groom is a co-op student-employee with the Y-12 Mechanical Engineering Department and the son of Ernest R. Watkins, Sr., superintendent of the General Machine Shop.

The bride is the daughter of Mr. and Mrs. V. L. Cunningham, 2515 East Fifth Ave., Knoxville.

The bride was given in marriage by R. L. Watkins, Jr. Her attendants were Mrs. W. L. Mincey, of Knoxville, matron of honor; and Miss Theresa Gossett.

W. L. Mincey acted as best man. The bride attended East High School, Knoxville, where she was a member of the Student Council and Sub-Deb Club. The groom is a student at the University of Cincinnati, where he is a member of the Industrial Design Society.

After November 1 the couple will live in Cincinnati.

HARPER-BOLINGER

Mr. and Mrs. Chester S. Bolinger, who were married August 22 at the Grace Baptist Church, Oak Ridge Highway, are making their home on Lyons View Pike, Knoxville, following a wedding trip to Daytona Beach, Fla. The bride is the former Miss Eula Ann Bolinger, daughter of James V. Bolinger, of the Y-12 Forming Department, and Mrs. Bolinger, of Route 18, Knoxville. The groom is the son of Mr. and Mrs. Bruce Harper, 263 Maryville Pike, Knoxville.

The Rev. Roy Arbuckle performed the wedding ceremony. A program of wedding music was presented by Ed Smith, vocalist,



Mr. and Mrs. Fred W. Jones



Mrs. Chester S. Harper

accompanied by his wife on the organ.

Given in marriage by her father, the bride wore a gown of Chantilly lace and tulle. The fitted bodice of lace and tulle was finished with a portrait neckline and tiny scalloped sleeves. Her fingertip veil of imported illusion was held by a half-cup of lace. She carried a white orchid on a white Bible.

Attendants of the bride wore pink and coral taffeta dresses made with scooped neckline and full ballerina-length skirts. White carnations were used for their colonial bouquets. Mrs. Sue Chadwell, sister of the bride, was matron of honor. Bridesmaids were Miss Nancy Bolinger, sister of the bride; and Mrs. Bob Friets.

Jack Huff served as best man and ushers were John and William Harper, brothers of the groom; James Bolinger, brother of the bride; Clifton Sharp and Charles Williams.

The ceremony was followed by a reception at the church.

EGYPT PLANS HOSPITALS

Egypt has announced it will complete 28 hospitals in 1958, at a cost of \$24,000,000.



MISS MILDRED WHITE, A Y-12 BRIDE-ELECT, who will be married Sunday, September 28, at Dowelltown, Tenn., was honoree at a surprise bridal shower given by Geneva Carter and Ella Mae McKnight September 4 at Miss White's apartment in Oak Ridge. Guests seated from left are Emma Boyd, former Y-12er; Bettye Driver, Mildred White, the honoree; LaFaye Krohn, Joanna Isham, Virginia Boswell, Geneva Carter, one of the hostesses; Jackie Ward, former Y-12er; and Jean Granstaff. Standing are Wanda Livezey, Ella Mae McKnight, co-hostess; Eunice Webster and Lorraine White. The bridegroom-to-be is John Paul Judish, Oak Ridge National Laboratory.



Having survived another week without TOO many kicks, objections, recriminations and what have you—the Colyum takes off on another tour of the premises. So hang on tight and let's start with—

INDUSTRIAL RELATIONS

Between sniffles—shared by Superchief W. O. Elam—Plant Protection scribe Liz Campbell allows as how "this place is more confusin' than amusin'." (She can say THAT again) . . . Anyhow she relates that Guard D. H. Patterson and his wife, Wynetta, Cafeteria, are going on to Cincinnati and Hamilton, Ohio, after their visit in West Tennessee last week . . . Get well wishes are extended Guard K. G. Edgemon, ailing at home . . . Now that the fishing season has quieted down, the squirrel tails are flying—and folks just can't wait to see Capt. Emmett (Catfish) Moore flying a bushy brush from his automobile radio aerial . . . Get well wishes are speeded to Guard E. A. Bellamy and his many friends in Bldg. 9704-2 hope he will be back in his "pulpit" soon.

Meta Butler, Personnel Services; and daughter, Betty Jo, Medical, lit out last Friday night for a week in their old stompin' grounds around Camden, Jackson and other cotton picking points in West Tennessee.

Louise Gardipee was back on the job in Employment late last week after a short sick spell.

Lee Bagwell, the Sachem of Safety, rolled back in last Thursday after a couple of days of suffering miseries in the back.

Lots of folks, of course, remember Jane Walker, the Little Ray of Sunshine of the Division, who left a few weeks back on the Road to Maternity—well, she became the mother of a bouncing baby boy September 8, weighing five pounds, 13 ounces, and being named William Warner. The Pop is Clarence E. Walker, studying law at the University of Tennessee . . . Congrats, from we 'uns to you 'uns.

SHIFT SUPERINTENDENTS AND GENERAL UTILITIES

The Steam Plant extends condolences to T. L. Moore, whose father died last week.

R. D. Freels, Utilities, week-ended recently in Marion, Va. . . . Vacationers—whereabouts unknown to deponent—include W. S. Everett, C. H. Jarvis, J. C. Yarber, J. C. Sims and J. C. Thompson.

TECHNICAL

The Engineering Division is quietly chuckling over the plight of one of its more prominent personages—seems as how he left his lunch tray—well filled—on the

rail in the Cafeteria while he table hopped. When he turned around—presto, it had disappeared, and he never DID find it and had to refill.

Jesse Heatherly, Production Assay, and family vacationed in Panama City, Fla., last week . . . Janice Childress was another rest-er-upper at the same time, but didn't leave a forwarding address.

Joe Hamilton, Production Analysis, has moved to Oak Ridge from Maryville . . . Ozella Ward has joined G Shift, which put the welcome mat out for her last week . . . Get well wishes are extended Annie Smith . . . Marie Dinsmore and her husband, John, Product Processing, paddled to Pennsylvania for vacationing purposes.

Vacationing at his home in Oak Ridge last week was Al Townsend, of the Metallurgical Development Group of Development Operations . . . Guy Smith stayed at home in Knoxville.

Meanwhile, back in Engineering, Mechanical Engineering reports the C. T. Smiths went to Memphis for a week's rest . . . Tommy Swindell and family lolled down to Lakeland, Fla. . . . B. L. Hammer relaxed (?) around home . . . Back from a moving vacation—moving into a new home, that is—was E. J. Asbury . . . Fred Jones and spouse took in the sights of Chattanooga over the week end . . . W. I. Galyon is back from a vacation to Shangra La . . . Speedy recovery wishes are extended to W. R. Hensley and also to the son of the Bob Lassiters—little Sam 4, busted his arm in a fall . . . John Thomas and J. F. Gibson are welcomed back after illnesses . . . The P. F. Boyers are enjoying a two-week visit from his parents, of Pottsville, Pa. . . . Charles Chihasz has purchased a lot in Loudon preparatory to erecting a new Chihasz chalet in the near future . . . It is reported golfer Dave DeWalt shot a hole in one—seems as if the ball rolled 10 feet from the tee right into a gopher hole.

FINANCE AND MATERIALS

Plant Records folks and the many other friends of Martha Parks extend deepest sympathy to her on the death of her father, Robert J. Parks, last week in a Knoxville hospital.

Stores is still busy congratulating Bill Stanton, who recently became father of a son—no further statistics, however.

Mildred Reynolds, Materials, and husband are vacationing at their cabin near Townsend, Tenn. . . . Evan Williams is spending a week at her home in Madisonville, Tenn.

J. K. Jenkins, Property Sales, is spending this week at home in Kingston . . . A. Griffith has been visiting in Detroit, Mich., for a couple of weeks . . . R. E. Norton and J. O. Norman were home vacationers last week . . . J. B. Moneymaker is reported to have worked hard on his home vacation . . . Melmoth Hudson and Ross Eichorn were among the puny people last week—and rapid recovery wishes go to both of them.

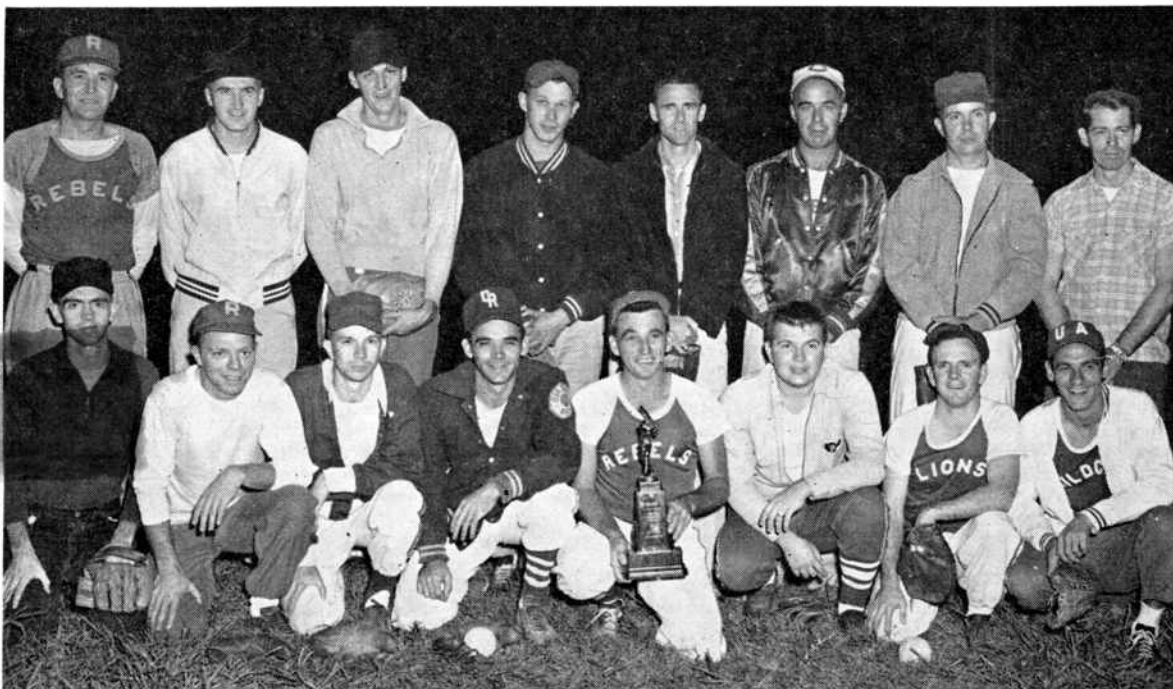
Tom Narcosse, Property, is resting up at home in Oak Ridge this week.

MECHANICAL OPERATIONS

Two of the Colyum's most prolific agents, Kathleen Milligan, General Machine Shops; and Tim Watt, Sunflower Shop; were vacationing last week. Therefore Divisional news is somewhat short.

The daughter of W. C. Morrow, Production Control, and Mrs. Morrow, Miss Alice Lee Morrow, is in Springfield, Mo., attending the Baptist Bible College to begin training for the foreign missions field . . . Congratulations are being extended Guy Seaton and the missus on the birth on September 5 of a son, named Lowell Edward, Continued on Page 4

WHIZ KIDS CAPTURE ALL-CARBIDE SOFTY TITLE



CHAMPIONS OF THE ALL-CARBIDE SOFTBALL TOURNAMENT IN A STIRRING SCRAP with another Y-12 team, the Reactors, are the Whiz Kids, above. In front from left are Don Forrester, Charley Murrin, Bill Everett, Ernie Collins, Manager J. D. Collins, holding the winners' trophy; Murrill Emery, Earl Farris and C. L. Stevens. In rear are John Brown, Ken Sommerfield, Jim Turner, L. F. Lee, Bob Rutherford, Gib Hatmaker, Sewall Brown, and Aron Smith.

Reactors Blanked In All - Y-12 Finals By 2-0 As Ernie Collins Again Shines

Little Pitcher Climaxes Amazing Four Game Performance By Fanning 19 For Total Of 76

In a sizzling all-Y-12 finals, the Whiz Kids walloped the Reactors by 2 to 0 to capture the All-Carbide softball tournament Tuesday night, September 9. Again it was the sterling, speedy twirling of Ernie Collins that brought the triumph to the Whizzers. Ernie Collins allowed only two hits and whiffed 19 Reactors in posting the fourth straight victory in the tournament. The Reactors are Y-12 Plant league champions for 1958.

"Jiggs" Seivers, Reactor first baseman and another veteran of the softball wars around Oak Ridge, got the only two hits for the Reactors. Only one other Reactor reached first—that on an error.

Chandler Also Hurlled Well

"Spud" Chandler, Reactor moundsman, was not awed by the masterful performance of his rifle-like rival. Chandler "stayed in there and pitched" all the way and allowed only four bingles to the victors. However, as in all of the tournament contests of the Whiz Kids, opponents found out they couldn't score with nobody getting on base. Chandler fanned two and gave two free tickets to first as against no walks by Collins.

In the four games won by the Whizzers, Collins established a record that should stand for a long time in Oak Ridge circles. Out of 84 batters faced, he fanned 76 and allowed only five hits—his first win over Oak Ridge National Laboratory's Chem-Tech team was a no-hitter.

Scoreless For Five Innings

Goose-eggs speckled the scoreboard for the first five innings of the title tilt. Then Ken Sommerfield, the Kids' shortstop, singled and went to second base on a passed ball. Up came Manager J. Collins, the "big brother" of the Collins family battery, to slap out a double, scoring Sommerfield with the first tally. J. Collins then came all the way home when Chandler threw wild to second base, trying to catch the Whizzer catcher off the sack. That was all that was needed.

J. D. Collins led his mates in hitting to insure victory for his kid brother. The champions' pilot had 11 trips to the plate, blasted two homers, a triple and two doubles in addition to being hit by opposing pitchers four times and drawing two bases on balls. His average was a skimpy .456.

Reactors Beat ORGDP Teams

The Reactors reached the final round of the tournament by beating the Oak Ridge Gaseous Diffusion Plant Engineers by 5 to 4. The Reactors previously had licked ORGDP C Shift by 10 to 1. To reach the finals the Whiz Kids beat Chem-Tech 8 to 0, ORNL Health Physics 13 to 0 and ORGDP A Shift 6 to 0.

The other two Y-12 teams, Early Birds, and Engineers, were beaten in their first appearances in the tournament. ORNL Health Physics defeated the Engineers 6 to 3 and the Birds bowed to the ORGDP D Ramblers by 7 to 3.

Line scores of the final game and the Reactor-Plant Engineers games follow:

Team	R	H	E
Reactors	000	000	0-0
Whiz Kids	000	002	x-2

Batteries: Reactors, Chandler and Smith. Whiz Kids, E. Collins and J. Collins.

Reactors	101	030	0-5	6	1
ORGDP Engineers	002	020	0-4	7	4

Batteries: Reactors, Chandler and Smith. Engineers, Bates and Burton.

Means Will Watch Big Fish-A-Rama

Evan Means, Research Services, president of the Tennessee Outdoor Writers' Association and one of Y-12's most enthusiastic sportsmen, is making plans to attend the Fish-A-Rama to be staged by the National Industrial Recreation

Three Teams Meet For Ridge Crown

Local Golfers Stage Last Matches Today

With three teams still in the running for the season's championship, the Y-12 Plant Golf League at Oak Ridge will wind up 1958 activities today, Wednesday, September 17. The three pairs with a chance at the crown are True-Kennedy, Gambill - Hamby and Holzkecht-Peckman. The other 21 teams that kept the race sizzling all summer, are mathematically out of contention, including Emlet-Hines, the 1957 champions.

Leaders Take Six Points

In last week's matches True-Kennedy and Holzkecht-Peckman each took six-point whitewash wins with Dehoney-Buckminster and Ratjen-Snyder as their victims. Gambill - Hamby knocked off Whitehorn-Brown for four points.

In the decisive contests this week True-Kennedy will meet Taylor-Lockhart, Gambill-Hamby will clash with Bartholomew-Smith and Holzkecht-Peckman will take on Mitchel-Tibbatts.

Six Other Whitewash Wins

Other results last week saw six-point wins also posted by Orrison-Thomson over Bartholomew-Smith, Boyd-Oliphant over Anderson-Nichols, McLendon-Mee over Youngblood-Gilcrease, Underwood-Shatley over Davis-Arrowood, Stroud-Tiller over Emlet-Hines and Pletz-Roberts over Taylor-Lockhart. Wallace - Peterson licked Hopkins-Belvin for five and Oxford-Collins defeated Speas-Cabe for four. Mitchel-Tibbatts and Kahley-Evans battled to a three-point tie.

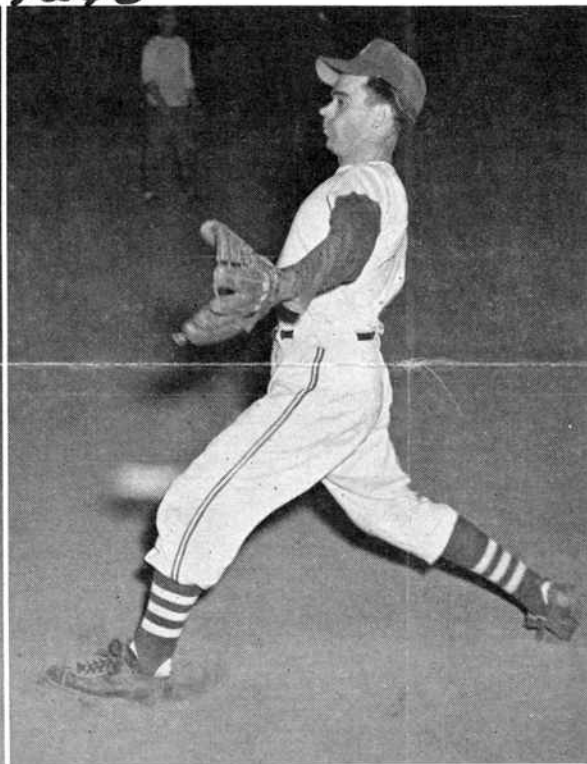
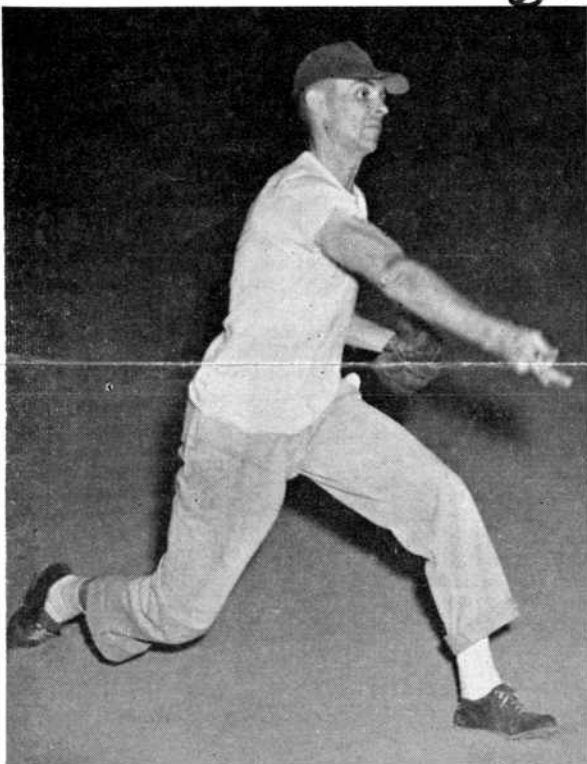
Paddy Peckman and Arnold Tiller tied for low scratch score with 37 each. U. M. Oxford had a 31 for low handicap after firing a 39 scratch.

League standing follows:

Team	Points Won
True-Kennedy	86
Gambill-Hamby	83
Holzkecht-Peckman	82
Orrison-Thomson	79
Boyd-Oliphant	77
Kahley-Evans	74
McLendon-Mee	73
Underwood-Shatley	73
Stroud-Tiller	73
Emlet-Hines	72
Anderson-Nichols	72
Bartholomew-Smith	69
Dehoney-Buckminster	66
Speas-Cabe	65
Davis-Arrowood	62
Ratjen-Snyder	60
Pletz-Roberts	60
Wallace-Patterson	59
Oxford-Collins	58
Mitchel-Tibbatts	56
Whitehorn-Brown	52
Hopkins-Belvin	44
Taylor-Lockhart	43
Youngblood-Gilcrease	40

Association at Paris Landing State Park, Tenn., September 27. Other Y-12ers and Union Carbide Nuclear Company anglers from the Oak Ridge installations may attend the big event.

The Fish-A-Rama is staged by the NIRA to permit fishing champions of industrial firms throughout the country to match their skill for the Grand National Fishing Championship of Industry for 1958. The site of the event is on Kentucky Lake not far from Paris, Tenn.



FANS AT THE FINALS IN THE ALL-CARBIDE SOFTBALL TOURNAMENT WERE TREATED to a whale of a mound battle between Spud Chandler, left, Reactors; and Ernie Collins, Whiz Kids.

Bow, Arrow Legal For Small Game

The bow and arrow is definitely legal for all types of small game and birds, including waterfowl, says the Tennessee State Game and Fish Commission. Any restrictions on arrows apply to big game hunting only.

Since broadhead points are expensive, most archers use "blunt points" for small game. Either manufactured "blunt points" or empty .38 caliber pistol shells work very well. The "blunt point" kills by shock instead of penetration or cutting. For flying birds a blade point with a V-cut in the leading edge is effective because if it makes contact with a bird it pulls itself into the bird instead of glancing off.

Sharpshooters Top Plant Pistoleers

The Sharpshooters held a one-point lead in the Y-12 Plant Pistol League following the latest reported matches, staged September 3. On that occasion the leaders split with the Masters, taking a handicap decision by 574.038 to 570.217 and the Masters winning scratch



RUNNERS-UP IN THE ALL-CARBIDE SOFTBALL TOURNAMENT were the Reactors, shown above. They battled gamely in the finals only to lose to the sizzling Whiz Kids. In the front row are Acting Manager J. E. Cheek, Bobby Roe, holding the second place trophy, Bill Dyer and Tom Hardin. In rear are Jiggs Seivers, Mack Wright, Spud Chandler, Sid Smith, Lewis Fitzgerald and Joe Cavosie. Manager Harley Law was in a Knoxville hospital for an operation when picture was made.

firing by 508 to 480. At the same time the Experts took both handicap and scratch margins from the Marksmen by 288.230 to 280.359 and 250 to 241.

Dave Alford topped the individ-

ual scorers with 267 and 289.014. P. H. Williams was second scratch at 255 and K. E. Smith second in handicap with 288.375. Carl Brewster came in third in both scratch and handicap with 250 and 288.230.

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State Rifle Team, Y-12er Brewster Do Well At Perry

The Tennessee State Civilian Rifle Team, captained by Carl G. Brewster, Y-12er, stood fourth or fifth among the 36 entries in the National Rifle Matches competition for the Port Clinton Trophy held recently at Camp Perry, Ohio, with returns incomplete when the Tennesseans left Ohio. The Port Clinton Trophy is awarded for proficiency on the 1,000-yard rifle range. The Tennessee team won the trophy last year.

In individual competition, Brewster did quite well by himself in a field of around 2,000 firing in the President's Match. This competition is 200 yards slow fire, 300 yards rapid fire and 600 yards slow fire. Brewster scored 141 out of a possible 150 to finish just out of the first 100 crack shots in the field. Brewster scored 10 bulls eyes in his efforts.

Birds, Kids Clash For Second Place

Although the regular season's schedule of the Y-12 Plant Softball League has been completed for some time with the Reactors as winners of both halves of the slate and the 1958 championship, there still is the matter of second place to decide. So the Whiz Kids, All-Carbide champions; and the Early Birds will clash for the runner-up honors and trophies.

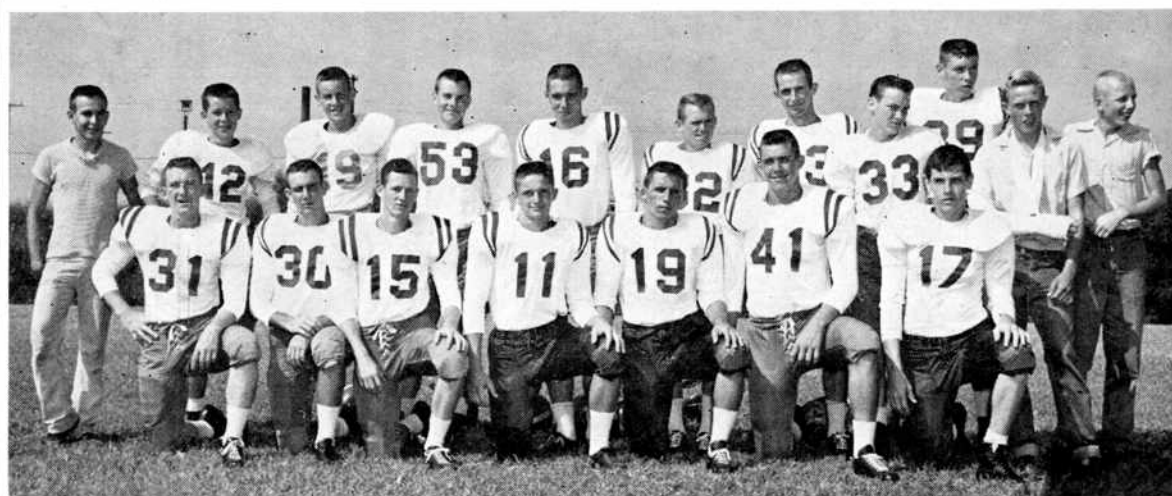
The Kids and Birds will meet at 10 o'clock Saturday morning, September 20, at Pinewood Park, in an effort to settle the matter. If the Whiz Kids, second place team in the final half of the season, win the game, they will have the runner-up spot clinched. In the first half of the season the two teams were tied for second place and if the Birds win the game this week, a best two out of three series then must be played before the situation is clarified.

ville, weighing seven pounds, 13 ounces. Then on September 8 a daughter was born to H. R. Butler, tipping the scales at eight pounds, seven and one-half ounces. H. A. Tobe is a Knoxville vacationer this week—to be with his daughter who will undergo surgery.

ALLOY

Alpha Five welcomes C. M. Bradford, a co-op from Auburn; and sends best wishes with D. B. Howell, returning to studies. J. W. Harless is vacationing at home in Oak Ridge and T. W. Robinson is doing likewise in Oak Ridge. F. Farmer, N. L. Dykes and J. H. Hammond got away without telling their destinations. Get well wishes go to R. H. Young, injured in an automobile mishap; and also to the father of P. J. Conerly, ill in Aberdeen, Miss. Paul King welcomed a new daughter to the family September 10—Ruth Alice weighed eight pounds, 13 ounces on arrival.

It's light-up time—so the CC is lighting out of here—and so GOOD BYE.



THESE STALWART SONS OF UCNC EMPLOYEES IN THE Y-12 PLANT AREA are candidates for the Oak Ridge High School 1958 football team. In the front row, from left, are Sam Owens, lineman; Woody Barwick, end; Larry Mason, tailback and safety man; Jackie Pope, tailback; Bobby Mitchell, alternate captain and wingback; Larry Richards, lineman; and Phil McLaughlin, end. In rear are Wesley Brothers, a manager; Travis Craig, end; Jack Truitt, lineman; Bobby Burton, lineman; Paul Huray, fullback; Eddie Jones, lineman; Tommy Bowers, end; Bob Pullen, lineman; Lewis Lanter, end; Gene Arrington, back who broke an arm in practice; and Gary Gramley, a manager.

Y-12er F. S. Patton Gives Geneva Paper

Continued from Page 1
of enriched uranium fuel cycles is the emission of alpha particles by U-234, which is about 3,000 times more active than U-235 (as an alpha emitter). As the gaseous diffusion process for separation of U-235 and U-238 is based on the physical difference in masses, it is apparent that the higher the enrichment of U-235, the higher will be the attendant U-234 concentration, and in consequence, the greater will be the hazard of airborne contamination. For example, the airborne alpha activity from a 90 per cent U-235 source would be more than 80 times the activity from a physically similar source of natural (0.7115 per cent U-235) uranium.

The most feared nuclear accident in a uranium chemical and metallurgical processing plant is an uncontrolled, non-explosive nuclear chain reaction and the accompanying lethal radiation. Such a chain reaction would correspond to the reaction carried out in a controlled manner in an atomic reactor installation.

This type of accident could occur from the inadvertent pouring of a concentrated uranium solution into a vessel such as a 55-gallon drum of the proper shape to become critical. The amount of uranium required to achieve "criticality" is dependent upon its U-235 content. For example, more than 300 kilograms of total uranium (U-235 plus U-238) in solution would be required for two per cent U-235 material while less than one kilogram would be required under optimum conditions for uranium of 90 per cent U-235 content.

Concentrated Facility Proposed

A considerable economic advantage would be gained by the location of facilities for the processing of uranium hexafluoride to metal, metal working facilities, fuel cladding and assembly operations and radiochemical separation facilities at the same site under a single management. A minimization of special staff personnel such as radiation control specialists, special auxiliaries, and interplant transport would result.

Wildcats To Meet 'Nooga Team Friday

Following their easy romp over East High School, of Knoxville, last Friday night, the Oak Ridge High School footballing Wildcats will take to the road this week for a clash with Chattanooga City High School in that city. The Wildcats easily trimmed East by 54 to 0 with several youngsters of Y-12ers on the squad (pictured above on this page) playing stellar roles in the victory. A large number of Y-12 grid fans is expected to accompany the team to Chattanooga for the Friday night game.

Four Y-12ers In All-Carbide Finals; Dorr, Burchfield And Hines Triumph

Plant Golfers Take 24 Matches; Lose 20 As Big Tourney Play Makes Good Progress

Four Y-12 golfers reached the finals in their respective flights in the All-Carbide Golf Tournament in results received through Sunday night. In overall play, including some matches in which Y-12ers were pitted against each other, our side posted 24 victories against 20 defeats.

In the Championship Flight, defending titlist Carl Dorr beat H. E. Smith, ORGDP; and Frank Burchfield (inadvertently omitted from this flight in last week's Bulletin) trimmed B. L. Crass, also of ORGDP; and Art Hines licked C. Isham, ORNL. George Wylie, Y-12, was defeated as was Arnold Tiller in first round play but Tiller won his first Consolation Flight match from Paul Harris, ORGDP.

Finalists from Y-12 are Ed Gambill, First Flight; Bill Mee, Third; Don Stroud, Fifth; and Nelson Tibbatts, Sixth.

Other Y-12 opening winners included Bill Hamil, Second; Newt Hamby, Third; J. P. Smith and George Oliphant, Eighth; H. E. Shatlet, 10th; U. M. Oxford, 11th; Jack Thomson, 14th; W. C. Hoppe, 15th; George W. Evans, 16th; J. D. Davis and J. T. Clouse, 17th; John Gregory, 18th; and E. A. Crow, 19th.

Y-12ers With 15, 10 Years Company Service

Congratulations to the following Y-12 employees who will complete 15 and 10 years of Company Service within the next few days:

15 YEARS

William H. Dodson, Research Services, September 17.
William W. Watson, Mechanical Maintenance, September 18.
Clifford Herrell, General Machine Shop, September 18.
Mary M. Tackett, Cafeteria, September 20.
Ernest G. Vann, General Machine Shop, September 20.
Blake F. Nicely, Mechanical Maintenance, September 21.
Mary E. Puckett, Property, September 21.
Homer R. Gilliam, Utilities, September 23.

10 YEARS

Arthur A. Gardner, Z Area, September 17.
James C. Thompson, Jr., Mechanical Inspection, September 20.
J. Wesley Gibson, Research Services, September 20.

RECORD QUILTER

A Caddo, Okla., woman, Mrs. Vettie Jones, quilted 46 double-bed size quilts last year, according to the Associated Press. For good measure, she also made five baby-size quilts.

Rides Wanted, Offered

Ride wanted from Kingston to Central or West Portal, A Shift. G. W. Howdysell, plant phone 7074, home phone FR 6-9526, Kingston.

Ride wanted from 180 Hillside Road, Oak Ridge, to Central Portal, straight day. Milo Ward, plant phone 7018, home phone 5-1548, Oak Ridge.

Ride wanted or will join car pool from Clinton to West Portal, A Shift. R. E. Ballew, plant phone 7-8352, home phone 242-W, Clinton.

Ride wanted from 315 East Drive, Oak Ridge, to East Portal, straight day. C. L. Evans, home phone 5-8203, Oak Ridge.

Ride wanted from 115 Georgia Ave., Oak Ridge, to West Portal, straight day. M. L. Rice, plant phone 7-8289, home phone 5-5332, Oak Ridge.

Ride wanted from Parsons Road, Oak Ridge, to North or Central Portal, straight day. Ronnie Stenglein, plant phone 7-8343, home phone 5-7166, Oak Ridge.

Two or three car pool members wanted from vicinity Highland Drive and West Adair, Fountain City, to West Portal, straight day. W. E. Wampler, plant phone 7756, home phone MU 7-1783, Knoxville.

Three riders wanted from Burlington, Whittle Springs section, Knoxville, via Knoxville - Clinton Highway to any portal, straight day. W. H. Holbert, plant phone 7-8374, home phone 4-0088, Knoxville.

Ride wanted or will join car pool from Ridgeview Drive, Clinton, to Central or North Portal, straight day. D. L. DeWalt, plant phone 7421, home phone 1702, Clinton.

Ride or riders wanted from Rocky Hill section, Knoxville, to North Portal, straight day. Don Parrish, plant phone 7490, home phone, Knoxville 8-2975.

Ride wanted or will join car pool from West Haven to West Portal, J Shift. J. O. Wiseman, plant phone 7409, home phone Knoxville 7-3987.

BRITISH GIRLS TRAINED

British girls now are being trained in technical drawing for careers as designers in the building, aircraft and engineering industries at a school established at Leicester, England.



Get well wishes are extended the following Y-12 employees who were patients last week in the Oak Ridge Hospital:

D. B. Blackburn, Research Services; J. L. Dement, Sunflower Foundry; J. W. Jenkins and M. J. Jewett, Process Maintenance; Ruth E. Hounshell, Chemical; H. H. Law, A. D. Douglas and W. D. Cunningham, General Machine Shop; H. E. Underwood, TW Shop; E. L. Hill, Buildings and Grounds; J. A. Marsh, Tool Grinding and Machine Maintenance; Melmoth Hudson and Ross Eichorn, Property Sales.